tained a copy of the opinion (No. 43645) rendered on January 16, 1934, by Judge William F. James of the Superior Court at San Jose, Santa Clara County. Judge James's opinion was on a suit in which appeared:

THE PEOPLE OF THE STATE OF CALIFORNIA ON THE RELATION OF THE CHIROPRACTIC LEAGUE OF CALIFORNIA, a Voluntary Association,

Plaintiff and Cross-complainant,

vs.

ROSCOE C. STEELE and LOIS B. STEELE, partners doing business under the style of DRS. STEELE & STEELE,

Defendants,

vs.

GLEN J. SIPES and J. K. CHRISTIE, and ASSOCIATED CHIROPRACTORS OF CALIFORNIA, a Voluntary Association,

Interveners and Cross-defendants.

The legal viewpoints as expressed by Judge James should be most interesting not only to the laity but to practitioners of the healing art. This comment is made in order to call special attention to Judge James's opinion, which is printed in this issue of CALIFORNIA AND WESTERN MEDICINE, page 142. Every member of the California Medical Association may well take the time to read the opinion, and it is to be hoped that all will do so.

EDITORIAL COMMENT*

CULTURAL LAG IN CLINICAL LOGIC

From a philosophical point of view the decade or more that often elapses between the discovery of a basic biologic fact and its general recognition in practical clinical logic, constitutes an interesting social phenomenon. To the busy practitioner, however, this cultural lag is of greater moment: the constant fear that there may be well confirmed basic facts with which he is not familiar, and yet which, if known, would modify his apparently logical diagnosis or methods of treatment.

Thirty-two years ago Levaditi [1] noted that alien erythrocytes injected into homologously immunized animals are often phagocyted before they can be hemolyzed. He regarded this phemonenon as of little clinical interest, since the ingested blood corpuscles were eventually digested by the leukocytes. Seven years later, however, Deycke and Much [2] raised the phemonenon to one of clinical importance. From histological evidence they concluded that the processes of phagocytosis actually isolates tubercle bacilli from the effective defenses of the animal body, the phagocytes themselves showing little ability to destroy the ingested bacilli. Their conclusion was afterwards confirmed by American investigators,[3] who found that, while tubercle bacilli are rapidly "lysed" in the peritoneal cavities of tuberculo-immune guinea pigs, little or no lysis is demonstrable in the bacilli taken up by the local phagocytic cells.

This immunologic paradox was afterwards studied in detail by Doctors Rous and Jones,[4] of the Rockefeller Institute, who found that typhoid bacilli, taken up by living leukocytes, are not only protected from injury by homologous antiserums, but are also protected against destruction by otherwise effective chemical antiseptics. Generalizing from these findings, the New York investigators emphasized the fact that cytoplasmic protection from antibodies and chemotherapeutic agents "should be taken into consideration in the study of diseases caused by infectious agents capable of living within tissue cells."

In spite of this emphasis, however, the possibility that the specific serum therapy of certain infectious diseases could be effective only in the initial, prephagocytic, or extracellular stages of the infection, has been generally ignored in practical clinical logic. Since convalescent human serum, for example, or antiserum produced by immunizing horses against poliomyelitis virus will kill or neutralize poliomyelitis virus *in vitro,* such serums have been regarded as presumptive cures for infantile paralysis. The Rous-Jones phenomenon would have suggested that the intracellular location of this virus would render the success of specific serum therapy highly improbable in this disease.

Doctors Rous, McMasters and Hudack,[5] therefore, have repeated their tests of eighteen years ago under conditions that should demonstrate their probable clinical applicability. Suspensions of rabbit embryonic fibroblasts were inoculated with vaccinia. Both viable and nonviable rabbit cells were found to absorb but not to destroy this virus, the thoroughly washed virus-impregnated cells causing typical vaccinia lesions on subsequent injection into rabbits. Specific immune serum, which, in control tests, would kill or neutralize free vaccine virus, was found to be viruscidal against the virus on or within the dead tissue cells. Tested with living tissue cells, however, the same antiserum was without demonstrable viruscidal effect. Exactly the same cytoplasmic protection was demonstrable with the filtrable agents causing rabbit fibroma and chicken sarcoma.

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* This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

1 Levaditi, C.: Ann. Inst. Pasteur, 16:233, 1902.

2 Deycke, G., and Much, H.: München med. Wchnschr., 56:1985, 1909.

3 Manwaring, W. H., and Bronfenbrenner, J.: J. Exper. Med., 18:604. 1913.

4 Rous, P., and Jones, F. S.: Ibid, 23:601. 1916.

5 Rous, P., McMasters, P. D., and Hudack, S. S.: Proc. Soc. Exper. Biol. and Med., 31:90 (Oct.), 1933.